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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,460	09/11/2003	Mark F. Oldham	ABIOS.040A	4903

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EXAMINER

LEE, PATRICK J

ART UNIT PAPER NUMBER

2878

DATE MAILED: 12/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/660,460	OLDHAM ET AL.	
	Examiner	Art Unit	
	Patrick J. Lee	2878	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 16-20, 26-36 and 42-49 is/are rejected.
- 7) ☒ Claim(s) 11-15, 21-26 and 37-41 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12182003</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Objections***

1. Claim 26 is objected to because of the following informalities:

With respect to claim 26, a reference to what is being detected or the purpose should be incorporated into the preamble. Merely stating "A system for detection" does not give direction as to the potential use of the invention. Such an addition to the preamble would not constitute a limitation of the claim unless the preamble gives vitality to the claim.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2, 16-17, 26-28, 42 & 47 are rejected under 35 U.S.C. 102(e) as being anticipated by US 2004/0113050 A1 to Olszak et al.

With respect to claims 1 & 42, Olszak et al disclose a system for scanning an object comprising: stage (50, 56) or slide (78) to hold an array of samples (82 and see paragraph [0026]) as a platform that supports an array of samples; detectors (22, 48, 68) as part of scanning microscope array (58) as a segmented detector to detect a

portion of signals associated with each sample on a plurality of pixels; motion controller (62) as a movement mechanism that provides a relative movement between stage (50, 56) and detectors (22, 48, 68); and acquisition controller (54) and data processor/computer (30) as a processor configured to take images from detectors (22, 48, 68) to provide a combined signal. Olszak et al discloses the combination of spaced linear element images (84) to yield a combined signal. The device by Olszak et al can not only identify features of interest, but can also identify color of the elements and perform other analyses (see abstract).

With respect to claim 2, Olszak et al disclose the motion controller (62) for moving stage (50, 56) such that the image moves laterally with respect to an optical axis.

With respect to claim 16, Olszak et al disclose a system for scanning an object comprising: stage (50, 56) to hold an array of samples (see paragraph [0026]) as a platform that supports an array of samples; motion controller (62) as a movement mechanism that provides a relative movement between stage (50, 56) and detectors (22, 48, 68) for inducing a plurality of relative motions between the image of the array of samples and the segmented detector; detectors (22, 48, 68) as part of scanning microscope array (58) as a segmented detector for capturing the identifiable signals from the array of samples at a plurality of relative positions between the array of samples and detectors; and acquisition controller (54) and data processor/computer (30) as a processor configured to take images from detectors (22, 48, 68) for combining the captured identifiable signals associated with the plurality of relative positions as to

yield a combined image of the sample array. Olszak et al discloses the combination of spaced linear element images (84) to yield a combined signal. The device by Olszak et al can not only identify features of interest, but can also identify color of the elements and perform other analyses (see abstract).

With respect to claim 17, Olszak et al disclose the motion controller (62) for moving stage (50, 56) such that the image moves laterally with respect to an optical axis.

With respect to claims 26 & 47, Olszak et al disclose a system for scanning an object comprising: stage (50, 56) to hold an array of samples (see paragraph [0026]) as a platform that supports an array of samples; detectors (22, 48, 68) as part of scanning microscope array (58) as a segmented detector to detect a portion of signals associated with each sample on a plurality of pixels; motion controller (62) as a movement mechanism that provides a relative movement between stage (50, 56) and detectors (22, 48, 68); and acquisition controller (54) and data processor/computer (30) as a processor configured to take images from detectors (22, 48, 68) to provide a combined signal. Olszak et al discloses the combination of spaced linear element images (84) to yield a combined signal. The device by Olszak et al can not only identify features of interest, but can also identify color of the elements and perform other analyses (see abstract).

With respect to claims 27-28, Olszak et al disclose the motion controller (62) for moving stage (50, 56) such that the image moves laterally with respect to an optical axis.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 3-10, 18-20, 29-36, 43-46, & 48-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2004/0113050 A1 to Olszak et al.

Olszak et al disclose the invention as described in the discussion of claims 1-2, 16-17, 26-28, 42, & 47.

With respect to claim 3, Olszak et al does not explicitly disclose the pixel to have a generally square active area, but such would be obvious to one of ordinary skill in the art in order to efficiently fit as many pixels into the detector as possible.

With respect to claims 4-6, the modified Olszak et al does not explicitly disclose the movement magnitudes to be a fraction as such, but such would have been obvious to one of ordinary skill in the art in order to allow for accurate detection of the image.

With respect to claim 7, the modified Olszak et al does not explicitly disclose the platform comprising a bundle of fibers, but such would have allowed for a separation between detectors and the sample which would be beneficial if it is possible that the sample could adversely affect the performance of the detectors. In addition, the bundle of fibers would be obvious to one of ordinary skill in the art in order to accurately transmit light from the sample to the detectors.

With respect to claim 8, the modified Olszak et al does not explicitly disclose the use of a CCD, but such is obvious to one of ordinary skill in the art to be the type of two-dimensional scanning camera referred to in paragraph [0022].

With respect to claims 9-10, the modified Olszak et al does not explicitly disclose the fiber arrangement, but such would have been obvious to one of ordinary skill in the art to ensure accurate detection of the light.

With respect to claims 18-19, the modified Olszak et al does not explicitly disclose the movement magnitudes to be a fraction as such, but such would have been obvious to one of ordinary skill in the art in order to allow for accurate detection of the image.

With respect to claim 20, the modified Olszak et al does not explicitly disclose the pixel to have a generally square active area, but such would be obvious to one of

ordinary skill in the art in order to efficiently fit as many pixels into the detector as possible.

With respect to claim 29, the modified Olszak et al does not explicitly disclose the pixel to have a generally square active area, but such would be obvious to one of ordinary skill in the art in order to efficiently fit as many pixels into the detector as possible.

With respect to claims 30-32, the modified Olszak et al does not explicitly disclose the movement magnitudes to be a fraction as such, but such would have been obvious to one of ordinary skill in the art in order to allow for accurate detection of the image.

With respect to claim 33, the modified Olszak et al does not explicitly disclose the platform comprising a bundle of fibers, but such would have allowed for a separation between detectors and the sample which would be beneficial if it is possible that the sample could adversely affect the performance of the detectors. In addition, the bundle of fibers would be obvious to one of ordinary skill in the art in order to accurately transmit light from the sample to the detectors.

With respect to claim 34, the modified Olszak et al does not explicitly disclose the use of a CCD, but such is obvious to one of ordinary skill in the art to be the type of two-dimensional scanning camera referred to in paragraph [0022].

With respect to claims 35-36, the modified Olszak et al does not explicitly disclose the fiber arrangement, but such would have been obvious to one of ordinary skill in the art to ensure accurate detection of the light.



With respect to claim 43, the modified Olszak et al does not explicitly disclose the combination of the signals producing an improved effective resolution, but such would have been obvious to one of ordinary skill in the art in order to improve the ability of the device to detect different color variations and look for particular objects of interest.

With respect to claim 44, the modified Olszak et al does not explicitly disclose the effective resolution of the probe position being better than that of the dimension of the pixel, but such would have been inherent through the combination of the signals producing an improved effective resolution.

With respect to claim 45, the modified Olszak et al does not explicitly disclose the combination of the signals producing an improved effective resolution, but such would have been obvious to one of ordinary skill in the art in order to improve the ability of the device to detect different color variations and look for particular objects of interest.

With respect to claim 46, the modified Olszak et al does not explicitly disclose the effective resolution of the probe position being better than that of the dimension of the pixel, but such would have been inherent through the combination of the signals producing an improved effective resolution.

With respect to claim 48, the modified Olszak et al does not explicitly disclose the combination of the signals producing an improved effective resolution, but such would have been obvious to one of ordinary skill in the art in order to improve the ability of the device to detect different color variations and look for particular objects of interest.

With respect to claim 49, the modified Olszak et al does not explicitly disclose the effective resolution of the probe position being better than that of the dimension of the

pixel, but such would have been inherent through the combination of the signals producing an improved effective resolution.

***Allowable Subject Matter***

7. Claims 11-15, 21-25, & 37-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

With respect to claims 11, 21, & 37, the modified Olszak et al discloses the use of data acquisition controller (54) to receive the data from the detectors and to control the movement of stage (56). However, the modified Olszak et al does not disclose nor suggest the processor estimating what a sub-pixel sized element might output based on the combination of pixels. As a result, claims 11, 21, & 37 and dependent claims 12-15, 22-25, & 38-41 are objected.

***Conclusion***


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Lee whose telephone number is (571) 272-2440. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272-2328. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J. Lee  
Examiner  
Art Unit 2878

PJL  
December 1st, 2005



**Stephone B. Allen**  
**Primary Examiner**